These questions and answers are solely concerning the Fort Wainwright portion of this privatization effort.

FWA Central Heat Power Plant

1. Document J9 includes references to several figures, e.g., "Figure 1 depicts a schematic of a boiler in the CHPP." The figures are not in J9 and were not observed either online or in the technical library (trailer). Where are the figures and how do we obtain copies?

   Drawings are posted on the DESC website.

2. Where are the CHPP system P&IDs (piping and instrumentation drawings) and electrical single line drawings and how do we obtain copies? The documents were not observed in the technical library.

   FWA CH&PP has these and can mail them out if requested. Please email requests to Pat Driscoll at pat.driscoll@us.army.mil with a copy of the request also to Doug Smith at Douglas.g.smith@dla.mil.

3. Monthly generation, steam, and coal data are provided in document J9 (table 4, Historical Performance) and in the DEIS reports in the technical library (top drawer of file cabinet). The data in the two documents do not agree. For the months of August 2003 through April 2004 (most recent DEIS report in the technical library), the following observations were made regarding the two data sets:

   a. Steam – None of the numbers match
   b. Coal – One of the monthly numbers matches, several are close, others are far apart.
   c. Generation – All of the figures match

   Section J info was compiled by a contractor. The DIES reports should be considered as accurate.

   Please provide the correct monthly Historical Performance data (steam, coal, and generation) for FY 00 (earliest DEIS reports in the technical library) through the most recent month for which the data are available.

   The DEIS info in the Tech. Library should be considered accurate.

4. Do the steam figures in document J9 (table 4) and the DEIS reports (technical library) refer to gross steam production or net steam delivered to the distribution system?

The Section J table appears to refer to gross while the DEIS report only refers to net heat steam.

5. Of the steam delivered to the heating distribution system, what percentage is returned as condensate?

   Averages 80 to 85%.

6. When was plant heat rate last tested, under what conditions were the tests performed (steam flows, electrical loads), and what were the results (both gross and net heat rate)?

   The plant heat rate has not been tested.

7. When were boiler efficiencies last measured or calculated and what were the results of the tests?

   The boiler efficiencies have not been measured or calculated.

8. Does FWA have any computer models (e.,g., ProSteam) of the steam system?

   No.

9. For a given fuel cost in $/MMBTU, what are the marginal costs of steam at the various headers under various operating scenarios?

   The costs have not been calculated.

10. For each of the six boilers and each of the four turbines, what are the availability and reliability measures for the last five years?

    This information has not been determined.

11. How many times have each of the six boilers been started (lifetime thermal cycles on the steam drums)?

    Due to the boilers' age (≈50 years) this information is not available.

12. What electrical test data are available regarding the integrity of the insulation in each of the operable steam turbine generators?

    Testing was conducted at the last overhauls (1998-2000) for turbines 3, 4 and 5. Turbine 1 has not been tested. If specific results are desired, please submit request and fax number to FWA and FWA will fax the results to the requestors.

13. For each of the past five years, how many times has the CHPP experienced a plant-wide blackout?

    9 times: 12/13/00, 3/4/01, 4/4/01, 6/18/01, 6/17/02, 1/25/04, 2/10/04, 4/30/04, and 10/27/04.

14. What is the estimated life expectancy for each of the six boilers?

    With proper PM; 20 years.

15. When were the boiler internals last photographed and how can we view the photographs?

    Boiler internals are not photographed during boiler inspections.

16. What is the status of the new steam turbine driven boiler feed pump (pump number 2)?

    Turbine has been disconnected from the pump which is used with its electrical motor only.

17. Other than the generator earthing resistor, are there any other areas or items of equipment that are known to contain PCB's?

    No others are known of.

18. What tests have been carried out on the power plant's transformers to establish integrity?

    The transformers are relatively new and have not been tested.

19. Is there a routine NDT program to determine condition and status of high-pressure and temperature welds?

    No.

20. Have any high-pressure welds been repaired or replaced in the last ten years? If so which ones?

    No. However, new isolating valves have been installed in the 400 psi steam loop within the last 5 years.

21. What data exist regarding the metallurgical condition of the steam piping and headers?

There are the results of testing conducted in the early 1990's which is available for inspection within the plant.

22. What strategic spare parts are carried on site?

    The spare parts list is contained within the technical library.

23. What is the value of the spare parts inventory?

    As the parts have been purchased over the years, their total value is unknown.

24. What is the expected or contracted turbine heat consumption after the installation of the air-cooled condensers? What is the expected impact of the air-cooled condensers on steam turbine backpressure and plant heat rate?

    
    ACC info.pdf

    See DESC website for attached data sheets.

25. After privatization, will the base still be required to meet the DoD targets for renewable energy?

    No.

26. What is the typical value in kW for CHPP station power (parasitic load)?

    2.5 to 3.0 MW depending on weather

27. What is the typical value in klbh or MBTU/h for station steam consumption, i.e., the difference between gross steam production and net steam deliveries?

    25 to 100klbs/hr depending on the weather.

28. What is the thawing shed's typical winter monthly steam consumption?

    Unknown as the facility is not metered.

29. What condition, risk, mitigation, and clean-up cost data exist for potential soil/groundwater contamination at or near the CHPP and coal pile?

    All ground/soil will remain Army property and cleanup for existing contamination will remain the Army's liability.

30. What fixed fire detection systems does the plant have and what areas do they cover? Are there any plans to install/upgrade fire systems? If so, what are they?

    The Baghouse has a dedicated fire detection and sprinkler system. There is no detection system or sprinklers within the CH&PP proper.

31. What procedures are in place to mitigate the fire risk?

    Rounds and inspections conducted by plant personnel.